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ABSTRACT

Drawing from an analysis of the literature on student attrition and retention at community colleges, this paper presents a typology of retention strategies as a structure by which further research can advance. Introductory material explains the typology, which categorizes retention strategies according to whether their purposes are to: (1) sort students into categories or groups in order to place them into college programs most suited to their goals, abilities, and needs; (2) support students in meeting their financial needs and family obligations; (3) connect students to the institution through a variety of activities designed to promote student involvement and integration; and (4) transform either the students (through such strategies as remedial education or career counseling) or the institution (through such strategies as curricular reform, instructional professional development, or community building). After explaining the development of the typology and offering examples of common retention strategies in each category, the paper offers a detailed analysis of each, including examples and discussing outcomes and effectiveness. Finally, the concluding section argues that a comprehensive community college retention program should include some techniques from each category. California's Puente Program is described as an example of a comprehensive program, which sorts students on the basis of placement test results and ethnicity; supports students in their efforts to access college services and balance home demands; promotes connections among students, between students and faculty, and between two- and four-year education through course exercises and community outreach; and transforms both the students and the college. A 101-item bibliography is attached. (AC)

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Sorting, Supporting, Connecting, and Transforming: Student Retention Strategies at Community Colleges

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Attention to Retention

Can one possibly say anything more about student retention at community colleges? Considerable attention has been devoted to this subject during the past thirty years: a search through the ERIC data base alone yields 122 citations about dropout prevention at community colleges. That so much attention has been devoted to this topic is interesting, and indicates that this must be an important subject to researchers and practitioners in community colleges. Examination of high attrition rates, both for individual community colleges and for larger systems, explains why this is so, and leads one to serious consideration of the options to improve college student retention.

All those studies about student attrition and retention at community colleges ... yet what do these many articles actually contribute to our understanding of student retention strategies? Do these reports provide a structure by which decisions can be made about the implementation of retention programs? Do they provide a meaningful intellectual or theoretical structure by which research can advance? I will attempt to answer some of these questions through the development of a typology of retention strategies.

Miles (1984, p. 292) provides a useful format for a typology of organizational choice based upon two dimensions, representing the 'target' and the 'motive' of change. Using those dimensions as the basis of the typology presented in this paper, the target dimension will be represented by two objects of change, the students and the institution. That is, retention strategies are understood as attempts to bring about changes in

students, in institutional characteristics, or both. The motives for change used by Miles are 'reactive' and 'proactive': for the purposes of this paper I shall add the category of 'interactive' to this dimension. Retention strategies can be devised which react to the problems that student characteristics or economic conditions present to the college (reactive strategies); which induce desirable student or college characteristics (proactive strategies); or, which increase meaningful interaction between students and the institution (interactive strategies).

This typology has resulted from a perceived need for a more inclusive schema to understand the many strategies represented in the predominantly 'show and tell' pattern of the retention literature. While more articles are being written about retention strategies, questions of how and why these strategies work require additional attention. An understanding of how each strategy is related to other strategies is missing from this literature.

The retention strategies discussed in the literature can be categorized according to whether their essential purposes are to sort students into categories or groups, connect students to the institution, support students in meeting their living needs, or transform students and/or the institution. **Sorting** involves those strategies which attempt to place students into college programs most suited to their academic and vocational goals, into courses according to their current academic abilities, or into programs according to their 'at risk' status. **Supporting** involves assistance to students in meeting their needs with regard to financial considerations or family considerations. **Connecting** includes those techniques intended to create a bond between the student and the

institution. Many techniques discussed in the literature under headings of student involvement and integration are included in the **connecting** category. Finally, **transforming** involves strategies intended to bring about changes in students, such as remedial education or career counseling, or changes in institutional character, such as curricular reform, instructional professional development, or community building. These categories are shown in Figure 1.

Figure 1: Categories of Student Retention Strategies

Category	Means
Sorting	group students into subsets
Supporting	help students with life problems
Connecting	attach students to each other and college
Transforming	develop students and reform college

Sorting and **supporting** are reactive strategies, intended to address issues presented to the college by virtue of the characteristics and backgrounds of their students. **Sorting** targets the students in the sense that they are grouped and placed to match pre-designed categories in the institutional structure. **Supporting** targets the institution to create and provide programs of assistance to students. That is, sorting matches subgroups of students with college services, while supporting develops college services to meet students' needs. **Connecting** strategies are interactive, intended to increase the frequency, duration, and significance

of exchange between members of the college community. **Connecting** targets both the student and the institution. Finally, **transforming** strategies are proactive, intending to effect changes in both students and the college in order to anticipate or eliminate possible causes of attrition. Some **transforming** strategies target the students, while others target the institution.

The typology has been guided by Tinto's concepts of social and academic integration (1985, 1987) and Astin's concept of involvement (1984, 1985). These ideas provide theoretical warrant, especially to the category of **connecting**. A series of interviews that I conducted with instructors at three community colleges in the San Francisco Bay area during the spring of 1991 revealed the importance of a concept of 'classroom connections'. (Quotes from these interviews are used to begin sections of this paper.) An examination of the literature on retention strategies revealed that **connecting** cannot stand alone as a technique for student retention, and that not all retention strategies are attempts to connect students with the college. Therefore, a more inclusive categorical understanding of how retention strategies work is developed in this paper.

Figure 2 shows the categorization of common retention strategies by type. Many strategies fit neatly into one category; others may be considered to overlap categories to some extent. The categories are not likely to be mutually exclusive in practice. While the types are not always empirically distinct, they have primary analytic value as prototypes or ideal types. As such, the reader may disagree with my placement of a particular retention strategy, but can still find the typology useful in a

heuristic sense. For example, the strategy of work study presents an interesting problem of classification. I have included work study under the heading of **connecting**, because the student who is employed on campus has the opportunity to develop meaningful bonds with college personnel. However, a good argument could be made that it belongs under the heading of **supporting**, since work study jobs help students pay the bills. One might visualize this typology as a series of interlocking circles in a Venn diagram. Some circles have very little overlap, while others have considerably more. The occasional retention strategy might even overlap three categories of the typology, depending upon how it is put into practice.

All retention strategies have the common goal of keeping students at the college long enough to realize their educational or occupational goals. There are, however, distinctive patterns for reaching this goal. The categories of **sorting**, **supporting**, **connecting**, and **transforming** represent patterns that synthesize a variety of retention strategies. Each category of this typology has certain characteristics, certain strengths, and certain weaknesses. Each may be understood as having specific intentions with regard to the focus of change (the student or the institution) and the problem that is being addressed. Each will be discussed separately.

Figure 2: Common Retention Strategies by Category Type

Category	Strategies
Sorting	'Best-fit' admissions Entry assessment and placement Program/course planning Early warning/academic alert
Supporting	Child care Financial aid Health and wellness programs Security and transportation
Connecting	Student activities, student groups Peer programs Orientation Faculty/student 'events' Attendance policy Faculty advisors, mentors Work study Outreach to high schools, four-year colleges
Transforming	Learning assistance, tutoring Remedial education Counseling about goals, careers Curriculum change Building community, teaching environment Policy changes Instructor development programs

Sorting Strategies

> Maybe 10% of the students at the community college are ready to really tackle college level work. We feel that we can be more successful if we are teaching the students who have the same skill needs. (Karen, English Instructor)

The retention strategies that fall under the heading of **sorting** are those which attempt to slice the amorphous 'student body' into meaningful subsets ('students at risk', honors students, transfer students, vocational students, remedial students, etc.). The problem of attrition, as attacked by **sorting** strategies, is to be conquered through the careful and accurate cleaving of students into the correct groupings. Following what might be considered a medical model, these strategies identify specific students in order to apply particular 'treatments'. I have included four types of retention techniques in this category: strategies of 'best fit' admissions; entry assessment and placement; program and course planning; and student monitoring through early warning and academic alert processes. The strategies in this category tend to involve the identification of student characteristics in order to create strata or classes that can be matched with appropriate and targeted retention techniques.

College marketing plans are the first retention techniques to be considered under the heading of **sorting** strategies. Marketing for retention implies that admissions and publications offices attempt to enroll students who are suited to the institution. For example, Cox (1980) cautions community colleges to seek students whose educational needs are consistent with the colleges' educational missions, and to avoid sales and promotional approaches that increase both enrollments and dropouts. Rootman (1972) proposed a model of student persistence based on 'personal fit' achieved by students as they interact with the college. As

described, the college marketing strategy might be considered its primordial retention strategy, seeking to sort the vast body of 'potential applicants' into those likely to 'fit' the institution and those who would not. While we often think of marketing in terms of more elite colleges with selective admissions, it is also important to note that community college marketing strategies need to be consistent with their mission and program delivery models.

Some community colleges have begun to use mandatory testing and placement of all new students (Horton, 1980; Horvath, 1979; Lum and Alfred, 1987; Opp and Colby, 1986; Roueche and Baker, 1987; Yess, 1979). While maintaining the open door of the community college, these institutions reserve the right to assess students' skills, usually in mathematics and English, and prescribe a series of courses on the basis of test outcomes. For example, Miami-Dade Community College makes extensive use of entry assessment and placement procedures (Roueche and Baker, 1987). Basic skills assessment, which includes tests in reading, mathematics, and written expression, is required of all students after admission to Miami-Dade. The results of these tests determine the appropriate courses and course loads for students, and prescriptive advising is the norm. In this way, the students at Miami-Dade are sorted into classes according to their achievement on these assessment tests. Student success, using this strategy, is predicated on placement into courses at the appropriate level of difficulty, and in a number of courses that provide a manageable balance with students' abilities. Class homogeneity is increased, and retention is affected to the extent that the

assessment process correctly places students at levels appropriate to their interests and abilities.

The strategy of course and program planning flows logically from the results of assessments (but may also be in use at some colleges without entry level testing and placement). A number of drop-out studies report student dissatisfaction with the quality of academic advising at community colleges, and report that students feel they were enrolled in classes that were not appropriate (Lipetsky, 1991; Lyons, 1991). In the sense used in this paper, it would appear that these students were not sorted well. Recent calls for improved guidance to students in the area of course and program planning have been made by Claus (1986), Friedlander (1989), and Heard (1988). Course planning is integrally related with program planning, especially for intended transfer students, and students' goals need to be considered when assisting them in choosing courses. Students who find themselves enrolled in a course that is not related to their program of studies, or in a course that does not contribute to their certification or transfer requirements, might be likely to withdraw from these courses.

Institutional monitoring of student progress is a **sorting** strategy in the sense that the monitoring process includes the definition of certain college actions (required counseling, limits on number of credits) as being appropriate with regard to specific student progress results. For example, one form of student monitoring is that of reminding students how close they are to completing their program, and requiring appointments with advisors at certain critical junctures. Miami-Dade Community College has developed a computer program which it calls the 'Advisement and

Graduation Information System (AGIS) that shows students not only what they have completed, but also what courses they still need to complete their programs (Roueche and Baker, 1987).

Another kind of progress monitoring invokes student identities such as 'on probation'. Some colleges, including Miami-Dade, have an 'academic alert system' to send routine letters to students who are not maintaining satisfactory progress. Sometimes the 'alert' comes even before the students have actually failed any courses. For example, Heard (1988) calls for regular follow-up by counselors or instructors of students who do not perform well on their mid-term exams, recommending that these students be contacted with regard to their difficulties.

Many of the studies written in the 1970's about community college attrition and retention report strategies that are essentially of the **sorting** type. A significant amount of research during this period attempted to identify variables that could predict student attrition. Such studies would be consistent with the belief that effective retention strategies require a careful understanding of the characteristics of dropouts. For example, the NORCAL consortium of 28 Northern California community colleges developed a questionnaire during the period from 1969 to 1971 to identify students' dropout potential (Dallas, 1971; Kester, 1980; and MacMillan, 1980). Landini (1972) creates a model of student attrition based upon a "universal classification scheme" (using cultural and demographic variables) to identify students who are likely to drop out. **Sorting** techniques of this type seek to work with what Bloom (1980) identifies as 'nonalterable variables', rather than concentrating on the alterable variables which can be modified to improve the teaching and learning

process. Much of the retention literature that fits this category has been conducted to determine the impact of characteristics that students cannot change, such as their socio-economic status, their race, or even their high school grade point average. Therefore, while the colleges may have increased knowledge about their students when they know that male students (or black students) are more likely to drop out than female students (or white students), there is precious little, in the absence of programs for such students, that the colleges or the students can do with these facts.

Identification of students who are 'at risk' of failure or dropping out can be a complicated analytic process (often involving multiple regression equations and complex probability assumptions). Coffey recommends "that there be installed a computerized system for identifying dropout-prone students at the end of registration, using biographical and class data" (1976, p. 32). Assessment need not be limited to subject tests of English and math skills: a brief to the Association of American Community and Junior Colleges proposed that assessment of students should also include assessments of past performance, mental, physical and emotional readiness, educational goals, study skills, and self-concept (1987, p. 39). There is no evidence that colleges have actually begun **sorting** on all of these characteristics for the purpose of class placement, but one could speculate that they enter into some colleges' definitions of 'students at risk'.

The result of this data gathering and analysis, used as a retention strategy by a number of community colleges, is the **sorting** of students into two groups: those who are 'at risk', and those who are not.

However, the sorting of students into groups on the basis of their 'at risk' status would seem to require more than simply identifying them as such. In order to qualify as a retention strategy, some action must be taken to extend the use of this strategy and render it effective. In this way, **sorting** might be considered an intervening strategy that assists in the proper focusing of other retention strategies. Many of these subsequent interventions take the college beyond those strategies considered here to be in the category of **sorting**, and into one of the other categories, especially those intended for **transforming** one type of student into another.

There is very little evidence on the effectiveness of **sorting** strategies: most of the reports in the literature call for more and better sorting, and are proposals for one of the techniques discussed above. Especially notable are examples of sorting using increasingly sophisticated assessment processes and computer programs. As such, the strengths and weaknesses of **sorting** as a retention device from a standpoint that is rooted in the evidence remain to be revealed.

Simple identification of a student as 'at risk' without targeted intervention strategies could easily become a self-fulfilling prophecy. This is one potential weakness of **sorting** strategies, especially early warning systems. If students are informed that they have a high probability of failure (especially on the basis of unalterable characteristics such as age, gender and race), this labelling may be sufficient to convince some students that failure is inevitable.

Is **sorting** just another word for what we know as tracking? In some cases, this may be true. To the extent that assessment processes

doom ethnic and minority students to years of 'skills and drills' in remedial classes, **sorting** might serve to maintain the remedial track placement of these students. To the extent that the identification of student weaknesses, or their 'at risk' status serves to become a self-fulfilling prophecy, **sorting** maintains the position of the student in the category of 'failure'. To the extent that students are prohibited from enrolling in the classes that interest them, and are required to enroll in those key gatekeeper classes that gave them problems in high school, future drop-outs may be created. Colleges need to be sensitive to these problems, and monitor both their intentions for **sorting** and its consequences.

Who benefits from **sorting** strategies? I suggest that a primary benefit is to the institution that can confidently structure its activities around clearly defined, somewhat homogeneous, categories of students. In this way, uncertainty for instructors about student needs is reduced, and the costs of retention programs are limited to those deemed to be most in need of assistance. There are a number of reasons that community colleges would find **sorting** strategies to be useful retention devices: Coffey (1976) uses the phrase "targeting resources for intervention" to explain the attraction. He concludes that 47 percent of the total student body at Central YMCA Community College (Illinois) need little or no support, while 31 percent definitely need services, and 22 percent need to be watched to see if they need services (1976, p. 30). By this reasoning, the college can reduce its efforts by ignoring the 47 percent who need no attention. In this way, colleges may wish to use **sorting** strategies to control the costs of their retention efforts, to concentrate

their efforts where they are likely to do the most good, to avoid 'treating' students who do not need 'treatment', or to meet faculty requests for less heterogeneity of skills in their classrooms.

How does the student benefit from **sorting** strategies? These strategies reduce the likelihood of students enrolling in courses or programs for which they are unprepared, especially with regard to academic skills. The students who are making progress toward a goal likely derive considerable benefit from documents and programs which verify their progress, and help them to understand subsequent steps to achievement. It may be that the students who most directly benefit from **sorting** (particularly if not accompanied by another category of retention strategies) are those who are sorted out of directed action. That is, if students pass the assessment tests, are exempted from upgrading, and are not identified as 'at risk', they are free to proceed unhindered through their college programs. Those who are identified as having problems, however, do not benefit primarily from **sorting** per se, but only from other techniques that are used by the college subsequent to the initial sorting. For these students, **sorting** is most effective to the extent that it successfully directs students to other categories of retention strategies.

Supporting

> And just life, you know, just takes a toll.
> (Andrea, English Instructor)

Students' attempts to succeed at college are affected by problems they encounter in their lives outside of school, especially in terms of issues related to finances, home and family, and transportation (Claus, 1986). Retention strategies of the **supporting** type strive to ease students' problems with the everyday aspects of life, and thereby make it more likely that they will be able to maintain their status as students. As Tinto points out, "Persistence requires the individual to successfully play the role of student, whereas family life requires the person to play different roles" (1985, p. 376). To the extent that the college is able to assist students in successfully meeting their role obligations as family members, bill payers, and so on, student retention will be increased.

Non-college aspects of students lives' (such as their living situations, their family status, and their financial status) have been investigated as correlates of student attrition. In so doing, Rowell (1974) labels these types of problems as 'self-related' (as opposed to 'college-related'), while Johnson (1991, following Bean and Metzer, 1985) refers to these 'environmental mediating variables' which influence attrition at community colleges.

Many colleges have done surveys of their withdrawing students, and a consistent finding is that students claim that financial problems, difficulties with transportation to the college, scheduling of classes in the evening, and lack of adequate day care arrangements led to the decision to drop out of college. (See Johnson, 1991, pp. 47-52 for a summary of these studies.) It has been argued (Cope, 1978; Walleri, 1981) that these reasons are given by students because they are socially acceptable reasons for dropping out. The student is thus saved the unpleasant

emotional task of confronting or divulging more private difficulties, but the college learns little about effective retention strategies.

Assistance to students in the form of on-campus daycare, eased parking and transportation, improved campus security arrangements, and financial aid are the most common techniques used by colleges to address such problems. With the exception of financial aid, this category of retention strategies has received little attention in the literature. This apparent neglect may derive from two sources. On the one hand, such strategies have come to be considered common sense (and somewhat banal), which might lead to a lack of interest in writing about them. On the other hand, some might argue that the strategies in this category are beyond the mission of the community college, and therefore not of central importance in discussions of college practice. As important aspects of students' lives, a comprehensive examination of retention cannot proceed without a discussion of **supporting** strategies.

The provision of daycare facilities on campus can increase the retention of parents, especially female students, whose responsibilities require them to merge the demands of child care successfully with those of student life. Accessibility of parent to child, and vice versa, can reduce some of the stress and role conflict that characterizes the roles of parent/student. Furthermore, on-campus daycare facilities are often models of quality childcare practices; they might even be instructional sites for students in early childhood education programs. Confidence about the quality of childcare being provided might induce students to remain enrolled in the community college. Research on the productivity of

employees with on-site daycare facilities may well generalize to the productivity of students at community colleges.

College health and wellness programs attempt to support students by providing care for students' physical and emotional conditions. While many community colleges do not have a health clinic for primary health care, most provide information and referrals. Programs operating through college counseling offices to increase AIDS awareness, combat eating disorders, or teach the importance of physical fitness to good study practices would all be considered examples of **supporting** strategies. Students would be retained by the college through these techniques to the extent that the programs are able to reduce attrition from lack of attendance due to poor preventive health care.

As institutions with exclusively commuter students, transportation and parking arrangements for students at community colleges take on significant proportions. Public transportation can be unreliable, and class schedules can be poorly served by bus or train schedules. Students who attend college on a part-time basis or who cannot (or will not) rely on public transportation require parking for their cars while they are in classes. A consequent problem is that community colleges rarely possess a great deal of land, and the dedication of limited land space for automobile parking seems less than ideal as an educational or environmental practice. Nevertheless, lack of parking may well be a reason for attrition by part-time students who must fit classes between other aspects of their busy lives.

The greatest attention for the strategies in this category of **supporting** has been devoted to financial aid, with somewhat contradictory

results. Some studies have found that student loans are negatively related to retention, while others have demonstrated that student loans are an effective retention strategy. For example, Astin (1975) demonstrated the negative impact of student loans on retention for four-year college students, with higher rates of dropping out among students with loans. The amount of the loan might be a critical variable, with higher loans leading to higher attrition. There is some evidence from interviews that students experience considerable concern over mounting student loan debts. For example, Walleri (1981) argues that both the type and amount of financial aid are related to retention and that some students, especially men, tend to have greater anxiety about mounting debts. On the other hand, Coffey (1976) found very little effect of financial aid on attrition for his sample of community college students, regardless of the type of aid or the amount.

Most studies find a positive relationship between retention and the receiving of scholarships and grants (Ramist, 1981; Hossler, 1984). That is, students who are awarded scholarships and grants are less likely to drop out of college than those who do not receive these awards. The extent to which this effect might be due to qualities of the students who receive such awards (given that many are merit based, rather than need based) is unknown. There may be at least two ways that scholarships and grants affect retention, as distinct from being simple indicators of 'low risk' students: by directly addressing financial conditions, and by personally influencing students' commitment to completion. Students' worries about having enough money to meet educational and living

expenses may be addressed while their feeling of obligation to the college is increased, and their self-esteem is boosted.

Does financial aid become a more important factor for students who are closer to completion, as Kester's (1971) research seems to suggest? Concerns about mounting debts would seem to be greater as the length of enrollment increases, as students may exhaust their own resources before they complete their program of studies. This might be particularly significant during periods of rapidly increasing educational costs, when the cost of educational enrollment can increase beyond pre-enrollment budget projections. Recognizing the significance of some of these questions, Friedlander (1989) recommends to Santa Barbara City College that it increase scholarships to second year students in order to get them to return for the second year of study.

The strategies for retention which I have considered under the heading of **supporting** are those which reach out to support the students in their lives outside the realm of the community college. The strength of the retention strategies in this category results from the attempt to address personal and environmental conditions of students' lives, and to bridge the potential conflicts between students' many roles. Students are thereby assisted in meeting the many demands being made upon them, and the college, which might otherwise compound a student's problems, becomes part of the solution.

The weakness of these strategies, from an institutional point of view, is that they require the college to reach beyond its educational mission, and take action in areas that might be deemed peripheral to its main business. In order for a college to make progress on these

strategies, extended relations with the outside community is required. For example, improved transportation requires negotiated agreements with public transportation agencies; improved security requires negotiation with local police and security firms; and increased scholarships and awards often requires accessing outside funding agencies, such as those who donate money to college foundations. These linkages may well have benefits from the point of view of the community and the community college, but their maintenance requires finite institutional time and resources.

Studies on the effectiveness of **supporting** strategies would be a welcome addition to the retention literature. At the present time, one cannot determine the extent to which such outside investments are justified for the community colleges; whether outside agencies should be encouraged to provide these **supporting** services on campus, or whether these services should simply be left to the private sector to provide as demand warrants.

Connecting Students

> At a school like this there is no residence hall, and there's no connection with the campus, the college, the idea of a college, because they are all going out of here in their pick-up trucks and their 4 by 4's and their cars and public transportation, day and night. You know, almost like an airport terminal. And they need more connection to the institution, and not just see it as a processing plant.
> (Keith, English Instructor)

Retention strategies which fall into the category of **connecting** are those which foster bonding between a student and the institution that is

the college. Techniques for creating attachments between students, with college programs and activities, and with college personnel (especially faculty) provide motivation to students for remaining enrolled at the college. **Connecting** strategies create the opportunities for a student to become linked with the community that is the community college, and to feel membership in that community.

The research of Vincent Tinto (1985) on social integration and Alexander Astin (1984) on student involvement is relevant in the context of **connecting**. As a result of the empirical work done by Tinto (1975, 1985) and those working with Tinto's model, a significant body of research exists to illustrate the process by which **connecting** strategies lead to increased student retention. Student involvement in campus life has been found to be one of the top indicators of student retention in a number of research studies (Astin, 1985; Lenning, et.al., 1980; Pascarella, et.al., 1986).

Increasing student involvement is more difficult at the community college than it is at other institutions of higher education. It is more difficult to make meaningful connections with students when they do not live on campus, and are attending classes on a part-time basis. Students at the community college tend to have many alternate family and occupational demands. Increasingly, students at the community college are adult learners, who frequently interrupt course work for job and family reasons (Schlossberg, Lynch and Chickering, 1989). The NIE Study Group claims that student commuting (rather than living on campus) and being part-time (rather than full-time) students tend to make the learning experience tangential to students' lives (1984). These conditions

make it more important that community colleges try to develop effective strategies for involving students. As such, **connecting** strategies are intended to counteract tendencies of non-involvement, and to try to make the community college a meaningful part of students' lives.

Common retention strategies that fit into this category include many kinds of programs for increasing faculty-student interaction, programs for increasing contact among students, and policies which maintain the contact between the student and the institution. Examples are to be found in programs of orientation, work study, attendance monitoring, classroom activities, and outreach to high schools and four-year institutions. These examples demonstrate both how **connecting** retention strategies work in practice, and how difficult they can be to implement effectively at a community college.

Orientation courses and seminars explain the college to the students, and involve students in activities which allow them to meet with other students. One goal of orientation programs is to help students make some important connections to the new college environment. There is considerable variation in the types of orientation programs that are provided to students at community college: programs might vary from a one-day introduction to the college, to a summer orientation for students and parents, through to a freshman seminar course of a semester's duration. All claim to be effective at reducing student attrition (Titley, 1985). In some sense, probably anything is better than nothing. Colleges also vary as to whether or not attendance at orientation is a required activity for all new students.

The literature contains many examples of orientation program formats, most of them adapted from four-year college models. One such example is provided by Opp and Colby (1986), who discuss a summer pre-enrollment orientation session that is designed to acquaint students with college services so that they will know where to turn when they encounter problems. Sessions of this type seek to develop connections of students with college resources. On the other hand, some orientation programs are intended for students in particular programs, and thereby foster opportunities for student connections with similar students. For example, Atkins (1979) discusses a one-day orientation session that is only for students in the Allied Health Division at Spartanburg Technical College. By **sorting** the students in this way, the likelihood of productive **connecting** between students with similar interests may be increased.

Considerable attention has been devoted to discussions of ways to increase student-faculty interaction. Flannery notes that:

> The more contact students can have with individual faculty members, department chairmen and administrators, ... the more likely they are to be satisfied with their education and to remain in college (1973, p. 12).

Reimanis (1973) points out with regard to programs at Corning Community College in New York that the theme of all retention activities is to help students understand that college faculty are interested in their personal and academic growth. The superficiality of how this might sound to students, and the constraints of faculty teaching loads at community colleges lead me to some concern about how realistic this ideal can be. Undaunted by the irony of his statement, Hellmich concludes that: "The department should examine methods of increasing student-instructor out-

of-class contact without making such contact burdensome for the instructors" (1989, p. 8). Limiting these contacts even further, but retaining a sense that they are important means to connect students to the institution, Friedlander (1989) suggests that departments should hold receptions for their students at the end of the academic year.

One recommended strategy to increase faculty-student interaction is to assign faculty advisors and/or faculty mentors to students (Drew, 1980). Although faculty members are often student advisors at four-year institutions, at community colleges students' advisors have often been paraprofessionals who possess detailed knowledge about the college programs. Heard (1988) recommends that the advising center at Shelby State Community College (Tennessee) be staffed by volunteer faculty members as a way to increase faculty-student interaction. He recognizes, however, that these volunteer advisors will require assistance to address detailed program questions from students. For the same purpose, Toback (1988) calls for faculty and staff to serve as voluntary mentors of high risk freshmen, another suggestion which combines a **sorting** strategy (identifying the high risk student) with a **connecting** strategy.

Garni (1980) calls for colleges to simulate the residential experience that students have at four-year institutions in order to increase students' involvement and identification with the college. Such a recommendation calls for increased extracurricular activities, such as intramural sports, student government (see also Horton, 1980 regarding participation of students on college committees), and college-sponsored clubs. By participating in these college social and political activities, students will meet other students and develop bonds of friendship and group

membership. These connections, it is argued, will increase student retention through integration of students with the college environment.

Hellmich (1989) found that persisters have more positive contacts with other students in the classroom, and between classes. By extension, increased student-to-student interaction may foster increased student retention. Therefore, some strategies try to accomplish increased interaction and assume that 'natural' levels of such interaction at the community college are inadequate for desired retention outcomes. In order to accomplish these ends, Friedlander (1989) recommends that first semester students be formed into study groups by the college. Both Stevenson (1979) and McCartan (1988) recommend block programming of students into learning communities with common courses in order to create cohesive student groups. What these suggestions have in common is the attempt to design student interaction opportunities, with the hope that student-to-student connections will develop as a result.

Using students as peer counselors or peer mentors increases connections between students, and has potential to maximize these connections while minimizing the resources required to do so. Ware and Gold (1970) report on a student-counselor assistant program at Los Angeles City College that shows a significantly higher persistence rate for students who were part of the counseled group in comparison to a control group. Richardson (1987) recommends using advanced students as mentors for new students, and MacMillan (1980) documents peer counseling programs at some Northern California community colleges. **Connecting** strategies of this type seem to have considerable potential to be effective and efficient at community colleges.

Work study programs increase the connection that students have with the community college. The provision of part-time work on campus not only increases the students' interaction with college personnel, but reduces the conflicting demands that would be made by an off-campus job. As such, the connections are increased in two ways: by increasing on-campus contact and decreasing off-campus contact. As McCartan (1988) points out, there is also potential for linking these student jobs to the students' academic studies, and thereby establishing connections not only with college personnel, but also with the substance of students' program of studies.

Attendance policies are unlike the other strategies covered in this section, in that they often take the form of punitive action if students do not participate in the manner prescribed by the college. For example, Hellmich (1989) recommends that a strict class attendance policy with clearly stated consequences for poor attendance is required in certain courses at Santa Fe Community College. Attendance policies of this sort are often seen as remnants of the era of 'in loco parentis' at institutions of higher education. However, an early and significant sign that a student is in difficulty is when that student stops attending classes. Cox (1980) argues that the intention of an attendance policy is to show timely concern for students who are missing classes. Some colleges, such as Miami-Dade Community College in Florida, have found that programs of outreach at the point of missed classes indicates institutional concern with students' well-being. They claim to have reduced the dropout rate by having absent students contacted by either faculty members or the counseling department (Roueche and Baker, 1987). In this way,

attendance policies are seen as attempts to maintain the connection between students and the institution.

Community college outreach to high schools and to four-year institutions increases the connections for students across institutional boundaries. In this way, the pathways of students through the educational pipeline are made explicit through institutional efforts, and retention is increased by clarifying the next educational goal. In terms of connections with four-year institutions, Simmons (1990) discusses agreements between Kentucky State University and local community colleges that facilitates the transition of students to the senior colleges. Greene (1986) reports a retention strategy that works in the other direction: students having difficulty at three senior colleges are enrolled at the Kingsborough Community College to address academic deficiencies before they return to their senior colleges. More common are programs of community college outreach to high schools. These programs seek to increase student retention at the high schools, and to establish early connections with potential community college students. Perhaps the most frequently cited and emulated model is that of the Middle College High School at LaGuardia Community College in New York (Cullen and Moed, 1988; Lieberman, 1986; Moed, 1981). In this program, high school students actually take courses at the community college campus. Other programs, such as the High School/College Partnership at Triton College in Illinois (Beckley, 1989) bring the community college courses, students, or faculty to the high school sites.

There may be limits to the effectiveness of connecting strategies, depending upon the kind of students that are targeted for these

techniques. A single-parent with a part-time job off-campus is unlikely to be attracted by college opportunities to serve on committees. Older students attending part-time may be less likely to be attracted to college clubs than are younger students attending on a full-time basis. In fact, many of the **connecting** strategies that attempt to increase student-to-student interaction may prove to be successful primarily for full-time students. With regard to strategies in this category, 'one size doesn't fit all'. Since most of the academic research on involvement and integration has been conducted on full-time undergraduates at four-year colleges, questions about the effectiveness of **connecting** strategies remain to be addressed for the population of community college students.

While strategies to connect students to each other and the college are important routes to student retention, community colleges should not consistently attempt to model themselves after their richer four-year cousins in this regard. Community colleges need to recognize that social integration through extracurricular activities is unlikely for most of their students. Cohen and Brawer state that "Student activities supporters have not been able to convert their programs to fit commuting students" (1989, p. 196). As a result, successful **connecting** strategies at community colleges will probably have to put greater emphasis on efforts to create connections within the classrooms. Such strategies may take the form of classroom introductions, learning and using students' names, the structuring of group activities or study groups, or the use of student discussion during classes. These techniques are simply examples of classroom activities which serve as a means of reducing student isolation. To explore just one such example, classroom discussions build rapport not

only between the teacher and the students, but also structure the conditions for rapport among students (Roueche and Baker, 1987). At a level that requires greater pedagogical change (and is discussed in this paper in terms of **transforming** institutions), learning communities (MacGregor, 1991) provide more extensive linkages among students and their instructors.

The benefits of retention strategies which connect students to each other, the institution, and to higher education in general are realized not only in terms of increased student retention, but also in increased student satisfaction, and concomitant reductions in student alienation and anomie. Connections both inside and outside the classroom serve to increase the integration of students with the college, and contribute to increased retention in this way. The benefits to community colleges are derived from having students who are informed about and involved in the activities of the college, and who are participants, rather than customers of the college community.

While the word 'intrusive' is used in a positive (helpful, caring) sense in the community college retention literature (eg. Lopez, Yanez, Clayton and Thompson, 1988), this idea also exposes a weakness of **connecting** strategies and highlights one problem in the conception of the community college. If students expect the institution to play a minimal role in their lives, they may resent requirements to attend orientation activities; they may be offended by calls from college personnel about their attendance; and they may object to what they might perceive as contrived situations to create community between instructors and students. Given the nature of the community college student, such attempts might

be perceived as unnecessarily bureaucratic, juvenile, or simply too time consuming. Faculty at community colleges are commuters as well; their time is further restricted by heavy instructional workloads. These structural conditions inhibit the kind of faculty-student interaction that one might expect at a small liberal arts institution. Therefore, while **connecting** strategies have great potential, those that occur inside of classrooms may have the greatest potential, and **connecting** strategies alone cannot suffice in a college retention program.

Transforming Students

> One of my responsibilities is to teach the content of my course, but very equally important, I think, is to assist them in learning how to learn.
> (Glen, Political Science Instructor)

Some retention strategies attempt to **transform** students from uncommitted to committed, from uninvolved to involved, from passive to active, or from failure-threatened to achievement-motivated. These techniques seek to help students develop the skills and motivation which will make them more likely to succeed. As Opp and Colby (1986) point out, some students at the community college need focused programs to help them overcome a long history of academic failure and negative attitudes toward education and learning. Such programs, to the extent that they deliver on their promise, must be considered truly transformational.

The theoretical concepts of academic integration (Tinto, 1986) and involvement (Astin, 1985) are also germane to the discussion of

transforming strategies. Tinto's concept of academic integration, which reflects membership in the intellectual life of the college (1986, p. 372), has been found by many studies to be highly correlated with student retention (see Bean and Metzer, 1985; Pascarella et.al., 1986; Pascarella & Terenzini, 1977; Spady, 1971, Tinto, 1975). In this context, it is the cognitive side of Astin's concept of student involvement that is important. Related concepts are provided by Turnbull (1986), who discusses two dimensions of student involvement: academic competence and college commitment. Retention strategies which seek to transform students are those which increase academic integration, involvement, or academic competence.

The importance of becoming actively involved as learners may be especially pronounced for minority students, older students, vocationally oriented students, and students who have not previously been successful in educational pursuits (Green & Stark, 1986; Richardson, Simmons & de los Santos, 1987; Smith & Bernstein, 1979; and Turnbull, 1986). For many of these students, there is a greater sense of alienation that must be overcome, and therefore a greater need to rely on programs to increase student academic success.

As I have structured this typology, three very important retention techniques fit into the part of the **transforming** category that targets students: learning assistance programs, remedial education programs, and career counseling programs. These techniques go by a variety of names at different community colleges, and can be offered by various organizational units at any one college. For example, learning assistance might be offered by an academic department (eg. English), by a specific

student affairs department (a learning skills subgroup), or by a department within the library (a 'learning center'). Remedial education may be offered by a subject area department (English or mathematics) or by a separate remedial department (Adult Basic Education).

Programs for learning assistance may take the form of special study skills sessions, learning resource centers, tutoring, or courses on college skills. Such programs attempt to teach students how to improve their reading, study, writing, time-management, or organizational skills. A basic question of philosophy has to do with whether learning assistance should be offered on a drop-in basis for students who choose to visit a learning center, or on a course enrollment basis. This question may revolve around the beliefs of college personnel regarding whether such assistance should be provided as a preventative measure, or can only be effective if provided when the student declares himself or herself ready for assistance. Many colleges try to do both. Of those colleges which offer specific courses to increase student study skills, variations exist as to whether these courses are compulsory or optional, and whether credits are offered.

Drop-in learning centers are one of the easiest retention strategies to implement and staff. A space, one staff member, and some good students with work study awards may be all that is necessary to establish such a program. Wenrich (1971) studied the effectiveness of individualized instructional programs offered through a learning center at the College of San Mateo in California. Using an experimental design, he found that the students assigned to the group which received tutoring in the learning center were retained to a greater extent than were those who

did not receive such tutoring. With the exception of such experimental programs however, the effectiveness of learning centers is limited by the extent to which students having difficulties are able to identify a solution and seek assistance. Referrals from instructors may increase the rate of usage, as may a central location, and strong advertising.

The literature in the field of student retention makes a very strong case for the 'student success course' as an effective agent for reducing attrition (Fidler, 1988; MacMillan, 1980; Nelson, 1967; Lenning, Sauer and Beal, 1980). Such a seminar might include instruction on reading textbooks, note-taking, conducting library research, studying, time management, writing term papers, forming study groups, and other skills for successful student performance. The underlying assumption is that many community college students lack these fundamental 'student skills'. Along similar lines, Drew (1990) argues for a mandatory for-credit seminar on attending college. One obstacle facing the college which uses this approach is the issue of transferability of these credits to receiving institutions for students in transfer programs. That is, many four-year colleges will not accept such courses for transfer, and students are reluctant to enroll in courses for which full transfer credit has not been negotiated.

The techniques for learning assistance that I have discussed need not be mutually exclusive. Duncan (1985) outlines the provision of learning assistance at the Community College of Denver. This college has a learning center with a learning lab, a writing lab, peer tutoring, and mini-courses on specific skills. Both workshops and individualized help are offered. The learning center conducts the campus orientation

program, and also offers credit-bearing courses in developmental English and Reading. This center might thereby be described as providing a range of learning assistance programs, and also some remedial education. Students are transformed into more competent learners through their participation in the activities of the center.

Remedial education often operates as a direct result of assessment testing. Students who do not perform at a designated level of entry on tests of English and Mathematics skills (a **sorting** strategy) are referred to remedial education classes (a **transforming** strategy) to improve their skills before they enter regular college level courses. However, exposure to certain 'missing skills' is not enough to prepare students for college level courses. As Cross (1971) points out, successful remedial courses need to overcome students' passivity in learning situations. Jones (1979) argues that community college students must be provided with many opportunities for early success. He found at Chicago City Colleges that students who are not traditional college students should not be made to fit the 'traditional student mold'. As such, remediating academic, motivational, and financial deficiencies will not be effective unless self perceptions are addressed, and specific attempts to motivate the failure-threatened personality are made (Jones, 1979).

There is some evidence in the literature to demonstrate the effectiveness of remedial programs. For example, Aarons (1975) demonstrates significantly greater persistence among students in a remedial foundations program at Mohegan Community College in Connecticut over a matched sample of students who did not participate. Adelman (1991) shows that retention of students in remedial reading at Amarillo

College is higher than similar students not enrolled in remedial reading. He argues that:

> Setting reasonable, effective, and measurable standards of performance for students and adjusting the curricula to ensure the attainment of the goals has helped many of these students achieve success not only within the developmental program, but in subsequent academic coursework, as well (Adelman, 1991, p. 3).

Other examples of demonstrated effectiveness may be found in Mann (1977) and Muha (1974). However, persistence and completion rates of students in remedial programs tends generally to be low relative to the total post-secondary student population.

Is remedial education to be compulsory or voluntary at community colleges? Lum and Alfred (1987) did a study of ten Michigan community colleges and compared the performance and retention of students in each type of program. They found that the compulsory programs had higher retention and higher long term performance. A concern about compulsory remediation is that it can become a component of student tracking from which escape is difficult. That is, counseling about goals combined with required remedial education can be interpreted as nothing more than the process of 'cooling out' that community colleges are condemned for by such critics as Clark (1960) and Karabel (1986). Yet on the other hand, voluntary remediation means that many students who cannot demonstrate the skills to succeed in college-level courses will continue to enter those courses (and risk predictable failure). This is a very difficult issue for community colleges.

The last strategy in this category involves the activity of student counseling. College counselors have been one of the few groups of those

writing about student retention who have systematically tried to assess the results of their efforts. Therefore, there is considerable literature to which the reader may refer regarding the effectiveness of various specific counseling techniques at community colleges (for example, see Dallas, 1971; Reimanis, 1973; Silver, 1978; Stodt, 1987; Woodruff, 1987). Counseling rests upon the assumption that a student who recognizes a problem is able to modify his or her behavior accordingly. Specific programs rely upon concepts from the psychological literature, especially motivation, locus of control, self-esteem, cognition, and metacognition. Counseling strategies may be employed to help students make transformations regarding their goals (**transforming** them from uncommitted to committed) or their self-esteem (**transforming** them from failure-threatened to achievement motivated).

The undecided student is more likely to drop out of college than is the student who has a clear idea about his or her occupational or educational goal (Lenning, et.al, 1980). Counseling programs which attempt to transform the undecided student into one who is committed to a particular educational outcome may include individual or group career counseling sessions, computerized 'career search' programs, or cooperative education placements. For some students, the identification of a goal may make a meaningful difference in the likelihood of retention by creating a sense of commitment to the idea of college completion.

An example of a counseling program that attempts to overcome problems of student self-esteem is the Academic Intervention Program which "is designed to help underachieving students to identify and overcome the blocks to their success" (Woodruff, 1987, p. 50). This

program takes the form of eight weekly group sessions that lead students through exercises in self-exploration, achievement awareness, the role of student, and success orientations. As a result of the program, successful participants are transformed into more confident and capable learners. Whether such interventions have long term effects is questioned by Garni (1980), who argues that continued monitoring and support is necessary to prevent successfully counseled students from becoming academically vulnerable in subsequent semesters.

The strength of the retention strategies in this category derives from the direct attempt to change some significant aspect of students' academic lives through education. To the extent that programs can succeed in **transforming** a failure-threatened student into a confident student, a poor student into a good student, and an undecided student into a committed student, this is a powerful approach to the question of retention.

However, Pat Cross points out that: "The psychology of failure is threatening and reinforcing" (1971, p. 20). To break a pattern of academic failure is a major, albeit worthy challenge. One might question how successful these techniques to transform students really are. Can the community college realistically expect to undo many years of learning to be an unsuccessful student? Therefore, a criticism of such strategies might then be that they are too idealistic, too unrealistic, or too complicated to effectively implement. While the induction of successful permanent change in students may indeed be difficult, I believe that **transforming** students' learning skills and motivations has the greatest potential of any strategies discussed thus far.

Transforming Institutions

> Not make the machinery smoother, but make the environment better. Enrich the environment, and lead the environment so that all kinds of things tell the student, "This is a place for you to be; it's a good place. We are not here just simply as a state institution to push you through the sausage machine." (Keith, English Instructor)

The community college may be thought of as one institution in a group that models themselves after the hierarchically superior research university, or it may be thought of as a distinct institutional type serving a unique function in higher education. To the extent that the community college adopts the practices of the research university, especially with regard to pedagogy, it may not be meeting the particular needs of its target population. Some retention strategies transform our thinking about college level instruction and classroom pedagogy away from the university model, with changes in the college institution as the target. As the community college adopts these strategies, it seeks to transform itself from a gatekeeper of higher education into a facilitator of higher education. It seeks to transform a laissez faire attitude with regard to students' success to a more directive attitude; to transform a 'shopping mall' educational institution to a learning community; and to transform a reproducer of the class structure of society to an equalizer. Zwerling represents some of these ideas when he claims that:

> To reduce significantly the staggering attrition at the average community college, it appears necessary to shift the focus from what is wrong with the student to what is wrong with the institution (1980, p. 56).

Ellison et.al. (1989) go so far as to argue that anything less than total commitment to student retention will likely result in educational failure, and criticize common retention efforts as being too fragmented, understaffed, and seldom based upon clearly formulated goals.

Tinto explains that institutions with high rates of retention are usually those with an emphasis on the "communal nature of institutional life" (1987, p. 7) The calls for 'building community' in community colleges often cite improvement of retention rates as an intended effect of changes that are proposed in philosophy and structure. As used in this sense, 'building community' applies to a category of strategies which seek changes in the community college in terms of the mission, emphasis, curriculum, or teaching methods.

One of the first of these transformations is that a community college must come to care about student attrition. As Jones (1986) points out, the college must address attitudinal, organizational, and administrative barriers in order to create an environment for retention. During periods of high enrollment demand, community colleges become more interested in questions of growth and demands for access than in questions of retention. Hellmich states that the changes that are necessary require:

> a shift from the philosophical mind set that students have a right to fail to one that students have a right to be assisted (1989, p. 1).

Duncan assigns responsibility for this transformation to the college administration: "The areas that college administrators can have an impact on are those of the academic and social climates of their institutions" (1985, p. 8). However, the administration cannot act alone if anything is to be transformed in a positive direction. Ellison, et.al. (1987) discuss

the importance of two-way communication among administrators, faculty and students. Hellmich (1989) points out that a retention program cannot be mandated from the administration, but requires broad discussion involving many from the campus community.

Ellison, et.al. (1987) provides an interesting example of Cuyahoga Community College's attempt to transform the institution in order to effect increased retention. At this college, recommendations about the school mission, community-school relations, emphasis on academic foundations, the school learning climate, leadership, expectations of students, and instructional assessment and feedback were redesigned as part of a major retention study. They argue that programs on the periphery of the institution, with little connection to the institutional core, are likely to fail. As such, effective retention is understood to require major institutional commitment.

Some note that successful retention programs begin and end with **transforming** the curriculum. That is, some **transforming** retention strategies seek curriculum change, so that courses are redesigned to reflect active learning, minority student perspectives, and/or the pedagogical characteristics of community college students (Hellmich, 1989; Lipetsky, 1991; MacMillan, 1980; Moore, 1974; Rendon and Mathews, 1989; Turnbull, 1986). Calls for alternative teaching approaches, including individualized courses, smaller 'modules', cooperative learning groups, and block programming are based upon the supposition that an improved classroom experience for students will result in increased retention through educational success.

Large introductory lecture classes reinforce tendencies toward passive learning, and give students little assistance in becoming active learners (Smith & Bernstein, 1979, p. 18). I have noted that the community college enrolls a large proportion of students who are academically less prepared for post-secondary studies. Cross writes with regard to students who have not been high achievers in past educational experiences:

> new approaches to learning for these passive students must be found. The problem appears twofold: (1) how to restructure the learning situation so that they will try again and (2) how to reward the effort (1971, p. 29).

These new approaches require that we modify our pedagogical strategies: that changes occur within the classroom. Techniques of instruction that might be considered 'time honored' are not necessarily worthy of deference. Therefore, successful retention strategies may be based upon techniques to transform teaching.

Bohr and Bray (1979) provide an example of a curriculum transformation that was used at Sacremento City College to improve success and retention of high risk students. Their program (called HELP) uses an integrative team teaching approach to assist students in obtaining the first 24 units towards an associate of arts degree. Students commit to enroll in two packages of studies (package 1 consists of English, psychology, math and reading; package 2 consists of speech, social science, and human development) with progress measured by competency criteria. Retention rates in this experimental program are demonstrated to be positively affected.

The creation of learning communities organized around specific tasks or themes might work especially well for full-time students, and has some promising applications for part-time students as well (Astin, 1985). Some examples of learning communities can be found at LaGuardia Community College and at over 25 colleges in the Washington State system (MacGregor, 1991; Matthews, 1986). These learning communities intentionally structure the integration of course work, and students learn in a mutually supportive environment. The Washington Center for Improving the Quality of Undergraduate Education explains that:

> Learning communities reform the curriculum, by putting together individually taught courses into coordinated, frequently team-taught larger wholes (Washington Center, 1991).

In this instance, what is essentially a transformation at the curriculum level serves to transform students into active learners, and also to connect them to one another. MacGregor (1991) cites of evidence of high rates of within semester retention for students in learning communities.

It may be argued that community college faculty teach as they were taught, and that changes in curriculum and pedagogy require programs of faculty development to transform faculty thinking about teaching and learning. To the extent that faculty development programs result in instructional innovations that lead to increased student success, these might be considered **transforming** retention strategies. Techniques for faculty development are often listed in the retention literature, but rarely analyzed there. For example, Duncan (1985) and Heard (1988) recommend seminars on college teaching for graduate credit, and forums of "Let's Talk Teaching" among their listed retention strategies. They do not

explore questions of how to get faculty involved in these programs, or how to evaluate the effectiveness of them.

Methods of providing faculty development programs (summer workshops, seminars, newsletters, instructional skills workshops) might be related to differences in administrative philosophy with regard to what is required to implement these techniques as **transforming** retention strategies. For example, Duncan lists a retention program objective as: "To train faculty on special needs of adult students, effective teaching approaches, counseling/advising techniques" (1985, p. 36). To my way of thinking, a strategy of 'instructor training' is not the same as a strategy of 'instructor development': the difference is greater than one of terminology alone. The latter would seem to be more consistent with a philosophy of building community.

Involving faculty members in the conduct of classroom research could be used to increase student retention by increasing instructor awareness of student learning processes and needs. Kochis (1991) and Rendon and Mathews (1989) make this claim. Teachers who are encouraged to conduct research on the learning that takes place in their classrooms, and on the effectiveness of the teaching process, may be more likely to take corrective action with regard to student attrition. By **transforming** the role of instructors to include the added dimension of classroom researcher, the classroom is transformed into an active learning experience for all participants.

The modification of college policies about a broad range of issues can also be considered a retention strategy. Policies such as regulations about late registration (Coffey, 1976), full-time attendance (Cohen, 1988),

withdrawal procedures (Farmer, 1980; Vail, 1966), grading (Farmer, 1980; Rasor, 1980), and class scheduling (Cox, 1980; Mayo, 1979) have been linked with recommendations for increased retention. Even policies about personnel practices can affect attrition and retention. For example, Zwerling (1980) explains that almost three-quarters of courses taken by community college students are taught by part-time instructors, who may be good teachers, but who have no opportunity to "relate to students in important nonclassroom ways that help build community" (1980, p. 56). **Connecting** is thereby rendered difficult unless **transforming** of policies takes place first. It is little wonder that Flannery (1973) recommends to Miami-Dade (as a result of an ad hoc committee on retention) that the college review all of its college policies and procedures to determine how each might affect attrition.

Horton (1980) has proposed a model for retention strategies that includes a major focus on those that I have labelled **transforming** strategies. He has created a continuum of increasing college 'depth', with techniques that range from mechanical changes (eg. barriers to enrollment) to changes in sensitive areas of student/teacher relations. His categorization of administrative action is unique in this field, because it addresses the range of retention programs in terms of types of organizational change. He argues that community colleges should try to operate with a minimum of policies, choosing to err on the side of flexibility with regard to policies and procedures.

What is particularly appealing about strategies of institutional transformation is that they do not center only upon student retention, but act to improve all aspects of the teaching, learning, and working

environment at the community college. **Transforming** strategies strive to focus institutional attention on the unique mission of the community college, and the specific needs of its students. This has the potential to be a powerful regenerating exercise, consistent with the Building Communities document produced by the American Association of Community and Junior Colleges (1988).

At this point, one might ask whether everything that a college does has now been identified as a retention strategy. To some extent this is true: few aspects of the college environment have no effect on student success and retention. Whether colleges refine their policies on grading, or involve the whole college community in a self-study of the institutional mission, retention will be affected. Their hiring practices, the design of buildings, and their governance structure all have the potential to increase or decrease student attrition in some way.

It may be that nothing short of institutional transformation will have a significant impact on endemic student attrition at community colleges. On the other hand, because many of the problems encountered by community college students are beyond the scope of the institution per se, it may be that piecemeal improvements are the only techniques that are likely to make a difference. MacMillan (1980) argues that transformation is not necessary, and colleges have the capability to reduce attrition substantially without making major modifications in program and service configurations. My own contention is that effective retention programs must involve strategies of **sorting**, **supporting**, **connecting**, and **transforming** in order to be truly effective.

Comprehensive Retention Programs

I have proposed a typology of retention strategies which has four elements: **sorting** students, **supporting** students, **connecting** students and the college, and **transforming** students and institutions. I argue that any comprehensive retention program at a community college should include some techniques from each category in this typology. A lop-sided program which concentrates activities in only one category would fail to provide the range of techniques to address the range of student problems that contribute to attrition.

To illustrate how such a comprehensive program might operate, I shall discuss California's Puente Program, a retention and transfer program for Chicano and Latino students. The Puente Program sorts students on the basis of placement test results and ethnicity; it supports students with accessing services and balancing home demands; it connects students in a course exercises and a community outreach program, and it transforms both students and an instructional unit at participating colleges.

The Puente Program, offered at 23 California community colleges, appears at first to be a program of remedial English for Chicano and Latino students. It involves a two-semester sequence of English courses, taught by a team comprised of an English instructor and a Hispanic counselor (Atondo, Chavez and Regua, 1986; Meznek, McGrath and Garcia, 1989). The students complete a two-course sequence in English: a developmental course is followed by English 1A, the California college transfer composition course. While the program begins with a remedial

English course, it is only partially a remedial program. The remediation of college English skills is accompanied by culturally-based support, counseling, and the mentoring of students by successful Hispanic community members.

Sorting of students for participation in Puente takes place at two levels: with regard to student ethnicity and with regard to English writing skills. Puente students all have Chicano or Latino backgrounds; this ethnic group traditionally has high attrition from postsecondary education (Rendon and Mathews, 1989). All Puente students begin their enrollment in the program as a result of a placement test that assigns them to the remedial level in English. Academic progress of students is carefully monitored.

Puente students are **supported** by having access to a counselor who can assist them with their financial and family concerns. The counselor often helps the students to understand about student loans, sources of funding, and assists with questions of budgeting. He or she can help the Hispanic student by meeting with the student's family and reassuring the family about their concerns in their own language. For example, a counselor may have to assure a Chicana student's parents that it is acceptable for their daughter to remain in the library after classes to conduct research for assignments.

Connections are established between the students, with particular college faculty, and with higher levels of education. **Connecting** between students begins with the English courses, which concentrate on group process and mutual support. The students work together in their common English courses, providing an arena for friendships beyond the classroom

as well. The program provides increased institutional contact through the counselor, who is able to connect students with the many resources of the college. The Puente Project has established connections with the University of California through a state-wide Puente Program office, and thereby facilitates transfer of students to that system. **Connecting** also takes place with the Hispanic professionals from the community, who volunteer their time as mentors. Each student is assigned a mentor, with matching done on the basis of the student's occupational goal. This mentor becomes a significant role model, and reinforces the importance of educational success.

Students are **transformed** from deficient in college-level English skills to proficiency. They may be **transformed** from having vague educational goals to having specific educational plans, which often include transfer to one of California's four-year colleges. They may also be **transformed** from having low self-esteem to having cultural pride in their own abilities and the accomplishments of their mentors and models.

Transforming at the institutional level occurs in classroom practice and in instructor development. The community colleges that are involved in the Puente Program make some transformations of regular instructional processes. The team teaching by a counselor and an English teacher represents such a transformation for two reasons. In the first instance, we do not often see two teachers in one classroom. In the second instance, the team teaching in the Puente Program is cross-disciplinary, making this a particularly unusual situation. (Limiting a class to students from one ethnic group represents a further break from established college norms.) The counselor-teacher team attend Puente residential retreats

during the summer with teams from other participating colleges. At these retreats, they confront issues of cultural sensitivity, pedagogical practice, and strategies for building partnerships (Student Academic Services, 1991).

The Puente Program is only one example of a retention program that encompasses all four of the categories in the typology that has been developed in this paper. There are probably many more. Programs may be small (a Puente stream includes about 25 students) or they may be large, college-wide efforts. Size does not matter in my definition of comprehensive. Rather, I believe that all truly comprehensive retention programs should include strategies from each category of this typology, so that **sorting**, **supporting**, **connecting**, and **transforming** are all part of a college's repertoire for addressing the attrition problem. That is, to be truly comprehensive, each category should be represented in the strategies encompassed by a program.

Effectiveness of Retention Strategies: A Call for Research

Retention is not one of the more difficult educational outcomes to measure in higher education. In contrast to more nebulous concepts like 'learning' or 'personal growth', it should be relatively easy to collect data about retention. Most student data bases can provide useful data, once some agreement has been reached on definitions of concepts (eg. stop out, drop out, completion). Therefore, we might expect to find that results of retention programs are widely available in the literature. Such is not, generally, the case. With the exception of some studies which I have

identified (mostly in the **connecting** category), there is a general paucity of research literature which attempts to address questions about the effectiveness of retention strategies. Some studies do gather survey data about reported outcomes from program participants, but few systematically gather information about increased retention rates over time.

This typology might be used to learn about the effectiveness of retention strategies within categories and across categories. One might investigate whether all strategies within a particular category are equally effective for specific student groups. For example, do all **connecting** strategies work equally well, or is one more effective than others? The typology may also be used to compare across categories, in order to assess the relative impact upon retention from **sorting**, **supporting**, **connecting**, or **transforming**.

It is important that community colleges attempt to monitor the effectiveness of their retention programs. As Sarason points out:

> to permit the institutionalization of expensive, time-consuming procedures that are supposed to serve important functions and then to have no way of evaluating their intended outcomes is, to say the least, wasteful game playing (1982, p. 117).

While there are a great many articles written about attrition and retention at the community college, adequate research has not been conducted to determine how and why some strategies work. I propose that this typology may be used with empirical data collection processes to contribute to a more powerful understanding about these questions.

Conclusion

The Building Communities document produced by the American Association of Community and Junior Colleges (1988) charges the community colleges with the obligation to help students succeed in higher education. It claims that "community colleges must help to solve the dropout problem" (p. 9). Concern about student retention at the community colleges is considerable, and most available evidence indicates that student attrition is high (Grubb, 1989; Karabel, 1986; National Institute of Education, 1984).

The literature on college improvement generally assumes that retention rates should be higher for most colleges than they are, and that these rates should be less biased in favor of the middle-class, white students who did well in high school. Retention per se is not the issue, but students cannot be successful at meeting their goals if they do not stay at the college long enough to do so. That is, retention, while not the goal, is an important indicator of student success. The task need not be to completely eliminate attrition: that task would be indefensible. Nevertheless, student retention strategies are important to community colleges, and college excellence requires coming to terms with student attrition.

I have summarized the literature about student retention strategies at community colleges through the development of a typology by which these many strategies might be classified. In this way, the information that is available in the literature has been synthesized and a unifying structure has been identified. The development of this typology assumes that student retention strategies can be understood on a conceptual level

by exploring the intentions that are common across particular retention techniques. If retention strategies can be understood according to their motives (proactive, interactive, or reactive change) and their targets (students or institution) a more complete understanding of how these strategies affect student retention is produced. I have claimed that every retention strategy involves **sorting** students, **supporting** students, **connecting** students and the college, or **transforming** students or colleges. I have argued that the unveiling of these categories contributes to our understanding of the elements required in a comprehensive retention program.

I had three purposes for writing this paper, corresponding to the substantive areas of theory, research, and practice. I wished first to create order out of a vast body of intellectual material, and through this order to illuminate some important dimensions of this subject. I also wished to provide a structure which supports comparative examination of retention strategies and by which further retention research (and evaluation) might proceed. Finally, I wished to assist institutions in making strategic choices about the implementation of retention programs. To accomplish these goals, I have reviewed considerable literature; have proposed a typology as a useful analytic structure; and, have reviewed available evidence on the effectiveness of various retention strategies. While I conclude that more research on the effectiveness of retention strategies is required, a college planning to implement a comprehensive retention program would include strategies from each category of this typology.

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